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FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) Renewal OFFICE OF AIR QUALITY

**Sellersburg Stone Company Inc.
1019 East Utica Street
Sellersburg, Indiana 47172**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: F019-15036-03109	
Issued by: Original signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: August 19, 2002 Expiration Date: August 19, 2007

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates two (2) stationary hot drum-mix asphalt producing source.

Authorized individual:	Diane M. Green
Source Address:	1019 East Utica Street, Sellersburg, IN 47172
Mailing Address:	P.O. Box D, Sellersburg, IN 47172
SIC Code:	2951
Source Location Status:	Clark
County Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD; Minor Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This stationary source consists of the following emission units and pollution control devices:

Plant # 1:

- (a) One (1) aggregate drum-mix dryer (Unit #2), installed in 1998, with a maximum capacity of 600 tons per hour, equipped with one (1) natural gas fired aggregate dryer burner, with a maximum rated capacity of 200 million British thermal units (MMBtu) per hour, using one (1) baghouse for particulate matter control, and exhausting at one (1) stack identified as SV1.
- (b) One (1) 30,000 gallon liquid storage tank (ID No. T-01), constructed in 1990.
- (c) One (1) 20,000 gallon liquid asphalt storage tank (ID No. T-02), constructed in 1990.

Plant # 2:

- (d) One (1) aggregate drum-mix dryer (Unit # 1), installed in 1999, with a maximum capacity of 300 tons per hour, equipped with one (1) dryer burner fired either by natural gas, No. 2 distillate or No. 6 residual fuel oil with a maximum heat input capacity of 116 million British thermal unit (MMBtu) per hour, using one (1) baghouse for particulate matter control, and exhausting at one (1) stack identified as SV2-1.
- (e) Two (2) 30,000 gallon liquid asphalt storage tanks (ID Nos. T-03 and T-04), constructed in 1999.
- (f) One (1) 15,000 gallon liquid asphalt storage tank (ID No. T-05), constructed in 1999.
- (g) One (1) 25,000 gallon No. 2 distillate or No. 6 residual fuel oil storage tank (ID No. T-06), constructed in 1999.
- (h) Cold-mix cutback asphalt manufacturing operation.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) One (1) natural gas fired hot oil heater, rated at 5.0 MMBtu/hr and exhausting to stack SV2.
- (b) One (1) natural gas fired heater, rated at 1.4 MMBtu/hr and exhausting through stack SV2-2.
- (c) One (1) natural gas fired hot oil heater, rated at 1.5 MMBtu/hr.
- (d) Replacement or repair of electrostatic precipitators, bags in baghouses, and filters in other air filtration equipment.
- (e) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (f) One (1) material storage and handling process, with a maximum storage capacity of 15,000 tons for limestone, 10,000 tons for sand, and 2,000 tons for reclaimed asphalt pavement (RAP), utilizing a wetting system for particulate control.
- (g) Two (2) cold feed storage bins with belt feeders. Each bin has maximum capacity of 32 tons of virgin aggregate. The belt feeders have a maximum capacity of 300 tons per hour.

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) to renew a Federally Enforceable State Operating Permit (FESOP).

A.5 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deletedby this permit.
- (b) All previous registrations and permits are superseded by this permit.

SECTION B GENERAL CONDITIONS

B.1 Permit No Defense [IC 13]

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

B.2 Definitions [326 IAC 2-8-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2, and 326 IAC 2-7) shall prevail.

B.3 Permit Term [326 IAC 2-8-4(2)]

This permit is issued for a fixed term of five (5) years from the original date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

B.4 Enforceability [326 IAC 2-8-6]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Termination of Right to Operate [326 IAC 2-8-9] [326 IAC 2-8-3(h)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

B.6 Severability [326 IAC 2-8-4(4)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.7 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

This permit does not convey any property rights of any sort, or any exclusive privilege.

B.8 Duty to Supplement and Provide Information [326 IAC 2-8-3(f)] [326 IAC 2-8-4(5)(E)] [326 IAC 2-8-5(a)(4)]

(a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit or, for information claimed to be confidential, the Permittee may furnish such records directly to the U. S. EPA along with a claim of confidentiality.[326 IAC 2-8-4(5)(E)]
- (c) The Permittee may include a claim of confidentiality in accordance with 326 IAC 17. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.9 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.10 Compliance with Permit Conditions [326 IAC 2-8-4(5)(A)] [326 IAC 2-8-4(5)(B)]

- (a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for:
 - (1) Enforcement action;
 - (2) Permit termination, revocation and reissuance, or modification; and
 - (3) Denial of a permit renewal application.
- (b) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (c) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

B.11 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an authorized individual of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.
- (c) An authorized individual is defined at 326 IAC 2-1.1-1(1).

B.12 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than April 15 of each year to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
 - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
 - (5) Such other facts as specified in Sections D of this permit, IDEM, OAQ, may require to determine the compliance status of the source.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.13 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs), including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ, . IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

B.14 Emergency Provisions [326 IAC 2-8-12]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describes the following:
 - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
 - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone No.: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section) or,
Telephone No.: 317-233-5674 (ask for Compliance Section)
Facsimile No.: 317-233-5967

Failure to notify IDEM, OAQ, by telephone or facsimile within four (4) daytime business hours after the beginning of the emergency, or after the emergency is discovered or reasonably should have been discovered, shall constitute a violation of 326 IAC 2-8 and any other applicable rules. [326 IAC 2-8-12(f)]

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) IDEM, OAQ , may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ , by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
 - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provision), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.
- (c) Emergencies shall be included in the Quarterly Deviation and Compliance Monitoring Report.

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination
[326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a FESOP modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
 - (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ, may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.17 Permit Renewal [326 IAC 2-8-3(h)]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

- (b) Timely Submittal of Permit Renewal [326 IAC 2-8-3]
 - (1) A timely renewal application is one that is:
 - (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
 - (2) If IDEM, OAQ upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.
- (c) Right to Operate After Application for Renewal [326 IAC 2-8-9]

If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as needed to process the application.

B.18 Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement the administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.19 Operational Flexibility [326 IAC 2-8-15] [326 IAC 2-8-11.1]

- (a) The Permittee may make any change or changes at this source that are described in 326 IAC 2-8-15(b) through (d), without prior permit revision, if each of the following conditions is met:
 - (1) The changes are not modifications under any provision of Title I of the Clean Air Act;

- (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
- (3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-8-15(b) through (d) and makes such records available, upon reasonable request, to public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ , in the notices specified in 326 IAC 2-8-15(b), (c)(1), and (d).

- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-8-15(a) and the following additional conditions:

- (1) A brief description of the change within the source;
- (2) The date on which the change will occur;
- (3) Any change in emissions; and
- (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

- (c) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (d) Alternative Operating Scenarios [326 IAC 2-8-15(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ or U.S. EPA is required.

B.20 Permit Revision Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC 13-14-2-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The application which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-11(b)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16]

- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action, or revocation of this permit.

- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-0425 (ask for OAQ, Technical Support and Modeling Section), to determine the appropriate permit fee.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

C.1 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period. This limitation shall also satisfy the requirements of 326 IAC 2-2 (PSD);
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) Pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided the source's potential to emit does not exceed the above specified limits.

(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.2 Particulate Matter Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.

C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and in 326 IAC 9-1-2.

C.6 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.7 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the plan submitted on March 13, 1996. The plan is included as Attachment A.

C.8 Operation of Equipment [326 IAC 2-8-5(a)(4)]

Except as otherwise provided by statute, rule or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.9 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

C.10 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-4 emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited is federally enforceable.

Testing Requirements [326 IAC 2-8-4(3)]

C.11 Performance Testing [326 IAC 3-6]

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.12 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.13 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented upon issuance of this permit. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

Unless otherwise specified in the approval for the new emissions unit, compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

C.14 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing performed required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63 or other approved methods as specified in this permit.

C.15 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)] [326 IAC 2-8-5(1)]

- (a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.
- (b) Whenever a condition in this permit requires the measurement of a flow rate, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.
- (c) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.16 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) These ERPs shall be submitted for approval to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

within ninety (90) days from the date of issuance of this permit.

The ERP does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

- (c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.
- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (f) Upon direct notification by IDEM, OAQ, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.17 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68.215]

If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall submit:

- (a) A compliance schedule for meeting the requirements of 40 CFR 68; or
- (b) As a part of the annual compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP); and

All documents submitted pursuant to this condition shall include the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

C.18 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-8-4] [326 IAC 2-8-5]

- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and is comprised of:
 - (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.
 - (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee’s current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:

- (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or
 - (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
 - (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.
 - (4) Failure to take reasonable response steps shall constitute a violation of the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
- (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied.
 - (3) An automatic measurement was taken when the process was not operating.
 - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-8-12 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.19 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4]
[326 IAC 2-8-5]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being

implemented.

- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.20 Emission Statement [326 IAC 2-6] [326 IAC 2-8-4(3)]

- (a) The Permittee shall submit an emission statement certified pursuant to the requirements of 326 IAC 2-6. This statement must be received in accordance with the compliance schedule specified in 326 IAC 2-6-3 and must comply with the minimum requirements specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8). The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The emission statement does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

C.21 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

- (a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.22 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (d) Unless otherwise specified in this permit, any quarterly report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The reports do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) Reporting periods are based on calendar years.

Stratospheric Ozone Protection

C.23 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices pursuant to 40 CFR 82.156
- (b) Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

Plant # 1:

- (a) One (1) aggregate drum-mix dryer (Unit #2), installed in 1998, with a maximum capacity of 600 tons per hour, equipped with one (1) natural gas fired aggregate dryer burner, with a maximum rated capacity of 200 million British thermal units (MMBtu) per hour, using one (1) baghouse for particulate matter control, and exhausting at one (1) stack identified as SV1.

Plant # 2:

- (b) One (1) aggregate drum-mix dryer (Unit # 1), installed in 1999, with a maximum capacity of 300 tons per hour, equipped with one (1) dryer burner fired either by natural gas, No. 2 distillate or No. 6 residual fuel oil with a maximum heat input capacity of 116 million British thermal unit (MMBtu) per hour, using one (1) baghouse for particulate matter control, and exhausting at one (1) stack identified as SV2-1.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emissions Limitations and Standards [326 IAC 2-8-4(1)] [326 IAC 12] [40 CFR Part 60.90]

D.1.1 General Provisions Relating to NSPS [326 IAC 12-1][40 CFR Part 60, Subpart A]

The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the facilities described in this section except when otherwise specified in 40 CFR Part 60, Subpart I.

D.1.2 Particulate Matter (PM) [326 IAC 12][40 CFR 60.90 to 60.93]

Pursuant to the New Source Performance Standards, 326 IAC 12 (40 CFR 60.90 to 60.93, Subpart I):

- (a) particulate matter emissions from the drum-mix and batch-mix asphalt plants shall not exceed 0.04 grains per dry standard cubic foot (gr/dscf), and
- (b) the visible emissions from each plant shall not exceed 20 percent opacity.

This particulate matter emission limitation is equivalent to 21.01 pounds per hour (lb/hr) based on an exhaust rate of 90,000 actual cubic feet per minute (acfm) and an exhaust temperature of 300 degrees Fahrenheit (EF) for the drum-mix plant # 1 (SV1), and 13.97 lb/hr based on an exhaust rate of 58,255 acfm and an exhaust temperature of 280EF for the drum-mix plant # 2 (SV2-1).

D.1.3 Particulate Matter (PM) [326 IAC 6-1-2]

Pursuant to 326 IAC 6-1-2 (Particulate Emissions Limitations), the particulate matter emissions from the mixing and drying operation shall be limited to 0.03 grains per dry standard cubic foot (gr/dscf). This particulate matter emission limitation is equivalent to 15.60 pounds per hour (lb/hr) based on an exhaust rate of 90,000 actual cubic feet per minute (acfm) and an exhaust temperature of 300 degrees Fahrenheit (EF) for the drum-mix at plant # 1 (SV1), and 10.47 lb/hr based on an exhaust rate of 58,255 acfm and an exhaust temperature of 280EF for the drum-mix at plant # 2 (SV2-1).

D.1.4 Particulate Matter (PM and PM-10) [326 IAC 2-2][40 CFR 52.21][326 IAC 2-8-4]

The source shall comply as follows:

- (a) The combined total production of asphalt mix in Plant # 1 and Plant # 2 shall be limited to 4,000,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month..
- (b) Based on the production limit in (a), the PM emissions from each drum-mix aggregate mixing and drying operations shall be limited to 0.04167 pounds of PM emitted per ton of asphalt produced, equivalent to less than 12.69 pounds per hour (equivalent to 55.57 tons per year) from the drum-mix aggregate dryer at plant # 1 (SV1) and less than 6.34 pounds per hour (equivalent to 27.78 tons per year) from the drum-mix aggregate dryer at plant # 2 (SV2-1).
- (c) PM-10 emissions from each drum-mix aggregate mixing and drying operations shall be limited to 0.029 pounds of PM10 emitted per ton of asphalt produced (based on annual asphalt production limit of 4,000,000 tons per year), equivalent to less than 8.80 pounds per hour (equivalent to 38.54 tons per year) from the drum-mix aggregate dryer at Plant # 1 (SV1), and less than 4.40 pounds per hour (equivalent to 19.27 tons per year) from the drum-mix aggregate dryer at Plant #2 (SV2-1).

These limits are required to limit the source-wide potential to emit of PM and PM-10 to less than 250 and 100 tons per twelve (12) consecutive month period with compliance determined at the end of each month, respectively. Compliance with this condition makes the requirements of 326 IAC 2-2 and 40 CFR 52.21 (Prevention of Significant Deterioration, PSD), and 326 IAC 2-7 (Part 70) not applicable.

D.1.5 Sulfur Dioxide (SO₂) [326 IAC 7-1.1] [326 IAC 7-2-1]

Pursuant to 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations), sulfur dioxide emissions from the 116 million British thermal units per hour burner for the aggregate drum mix dryer (plant # 2) shall be limited to 0.5 pound per MMBtu heat input when using No. 2 distillate oil and shall be limited to 1.6 pound per MMBtu heat input when using No. 6 residual fuel oil. These limits are equivalent to a maximum sulfur content of 0.5 percent and 1.67 percent when combusting No. 2 distillate oil and No. 6 residual fuel oil, respectively.

Pursuant to 326 IAC 7-1.1-2, this sulfur dioxide limit applies at all times including periods of startup, shutdown, and malfunction. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.

D.1.6 No. 6 Fuel Usage and Equivalents [326 IAC 2-8] [326 IAC 2-2] [40 CFR 52.21]

Pursuant to 326 IAC 2-8-4(1), the following limits shall apply:

- (a) The input of No. 6 residual fuel oil and No. 6 residual fuel oil equivalents in the 116 MMBtu per hour burner for the aggregate dryer shall be limited to 755,025 gallons per twelve (12) consecutive month period with compliance determined at the end of each month, so that SO₂ emissions are limited below 100 tons per year. For purposes of determining compliance, the following shall apply:

Every gallon of No. 2 distillate fuel oil burned shall be equivalent to 0.30 gallons of No. 6 residual fuel oil based on SO₂ emissions, such that the total input of No. 6 distillate fuel oil and No. 6 distillate fuel oil equivalent input does not exceed the limit specified.
- (b) Sulfur content of No. 2 distillate fuel oil shall not exceed 0.5% by weight.
- (c) Sulfur content of No. 6 residual fuel oil shall not exceed 1.67% by weight.

Compliance with this condition makes the requirements of 326 IAC 2-7 (Part 70) not applicable to the source.

D.1.7 Natural Gas and Equivalent Usage [326 IAC 2-8-4][326 IAC 2-2][40 CFR 52.21]

Pursuant to 326 IAC 2-8-4(1), the following limits shall apply:

- (a) The input of natural gas and natural gas equivalents in the 200 MMBtu per hour burner (plant # 1) and 116 MMBtu per hour burner (plant # 2) for the aggregate dryer shall be limited to 1005.14 million cubic feet (MMCF) per twelve (12) consecutive month period with compliance determined at the end of each month, so that NOx emissions are limited below 100 tons per year.
- (b) For purposes of determining compliance, the following shall apply:
 - (1) Every 1,000 gallons of No. 2 distillate fuel oil burned shall be equivalent to 0.1263 MMCF of natural gas based on NOx emissions, such that the total input of natural gas and natural gas equivalent input does not exceed the limit specified.
 - (2) Every 1,000 gallons of No. 6 residual fuel oil burned shall be equivalent to 0.2474 MMCF of natural gas based on NOx emissions, such that the total input of natural gas and natural gas equivalent input does not exceed the limit specified.

Compliance with this condition makes the requirements of 326 IAC 2-7 (Part 70) not applicable to the source.

D.1.8 Hazardous Air Pollutants (HAPs) [326 IAC 2-8-4][326 IAC 2-4.1-1]

The total combined source wide emissions of any single HAP and total HAPs shall be limited to less than 10 and 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month, respectively, to render the requirements of 326 IAC 2-4.1-1 not applicable.

Compliance with condition D.1.4(a) and based on the HAP emission factors for drum mix hot mix asphalt plants listed in U.S. EPA's latest version of AP-42, the single HAP and total HAPs emissions shall be limited to less than 10 and 25 tons per year, respectively. Compliance with these limitations shall also make the requirements of 326 IAC 2-7 (Part 70) not applicable to the source.

D.1.9 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and any control devices.

Compliance Determination Requirements

D.1.10 Particulate Matter (PM) and PM-10

In order to comply with Conditions D.1.2, D.1.3 and D.1.4 (b) & (c) the baghouses for PM and PM-10 control shall be in operation at all times when the respective drum-mix dryers and burners (plants #1 and #2) are in operation.

D.1.11 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

During the period between 30 to 36 months after issuance of this permit, the Permittee shall perform the following to demonstrate compliance with Conditions D.1.2, D.1.3 and D.1.4 (b) & (c) for the drum-mix aggregate dryers (plants #1 and #2):

- (a) PM and PM-10 testing utilizing methods per 40 CFR Part 60 Appendix A, Method 5 for PM and methods, as approved by the Commissioner for PM-10. PM-10 includes filterable and condensable PM-10.
- (b) Opacity testing utilizing 40 CFR Part 60 Appendix A, Method 9, to demonstrate compliance with the opacity limitation of Condition D.1.2.

This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C-Performance Testing.

D.1.12 Sulfur Dioxide Emissions and Sulfur Content

Compliance with Condition D.1.5 shall be determined utilizing one of the following options.

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed 0.5 pounds per million Btu heat input when firing No. 2 distillate fuel oil, and 1.6 pounds per million Btu heat input when firing No. 6 residual fuel oil:
 - (1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or
 - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 200 and 116 MMBtu per hour heaters, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.1.13 Visible Emissions Notations

- (a) Visible emissions notations of the two (2) drum-mix aggregate dryer/burner baghouse stack exhausts, and the conveyors and transfer points shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee will record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for these facilities shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.1.14 Parametric Monitoring

The Permittee shall record the total static pressure drop across each baghouse controlling the respective drum-mix aggregate dryers, at least once per shift when the respective aggregate dryer is in operation and venting to the atmosphere. When for any one reading, the pressure drop across each baghouse is outside the normal range of 3.0 to 5.0 inches of water for the plant # 1 baghouse and 3.0 to 6.0 inches of water for the plant # 2 baghouse or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C -Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.15 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the drum-mix aggregate mixing/drying operations (plant #1 and #2) when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.

D.1.16 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B - Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.17 Record Keeping Requirements

- (a) To document compliance with Condition D.1.4(a), the Permittee shall maintain records of the combined total production of asphalt mix in Plant #1 and Plant # 2. The records shall be complete and sufficient to establish compliance with particulate matter limitations set forth in this permit.
- (b) To document compliance with Conditions D.1.5, D.1.6, D.1.7, and D.1.12, the Permittee shall maintain records in accordance with (1) through (6) below.
 - (1) Calendar dates covered in the compliance determination period;
 - (2) Monthly fuel usages;
 - (2) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period the natural gas fired boiler certification does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1); and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

- (4) Fuel supplier certifications;
 - (5) The name of the fuel supplier; and
 - (6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.
- The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.
- (c) To document compliance with Condition D.1.13, the Permittee shall maintain records of once-per-shift visible emission notations of the two (2) drum-mix aggregate dryer/burner baghouse stack exhausts.
 - (d) To document compliance with Condition D.1.14, the Permittee shall maintain once per shift records of the inlet and outlet differential static pressure during normal operation when venting to the atmosphere.
 - (e) To document compliance with Condition D.1.15, the Permittee shall maintain records of the results of the inspections required under Condition D.1.15 and the dates the vents are redirected.
 - (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.18 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.4(a), D.1.6, D.1.7 and D.1.8 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]

- (a) Cold-mix cutback asphalt manufacturing operation.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-5-2]

Pursuant to 326 IAC 8-5-2 (Miscellaneous Operations: Asphalt Paving), the use of cutback asphalt or asphalt emulsion shall not contain more than seven percent (7%) oil distillate by volume of emulsion for any paving application except the following purposes:

- (a) penetrating prime coating
- (b) stockpile storage
- (c) application during the months of November, December, January, February and March.

D.2.2 Volatile Organic Compound (VOC) [326 IAC 2-8-4]

Liquid binders used in the production of cold mix asphalt at this source consist of rapid cure, medium cure, slow cure, emulsified and gelled asphalt and are defined as follows:

- (1) Cut back asphalt rapid cure, containing a maximum of 25.3% of the liquid binder by weight of VOC (solvent) and 95% by weight of VOC (solvent) evaporating.
- (2) Cut back asphalt medium cure, containing a maximum of 28.6% of the liquid binder by weight of VOC (solvent) and 70% by weight of VOC (solvent) evaporating.
- (3) Cut back asphalt slow cure, containing a maximum of 20% of the liquid binder by weight of VOC (solvent) and 25% by weight of VOC (solvent) evaporating.
- (4) Emulsified asphalt with solvent, containing a maximum of 15% of liquid binder by weight of VOC solvent and 46.4% by weight of the VOC (solvent) in the liquid blend evaporating. The percent oil distillate in emulsified asphalt with solvent liquid, as determined by ASTM, must be 7% or less of the total emulsion by volume.
- (5) Other asphalt with solvent binder, containing a maximum 25.9% of the liquid binder of VOC (solvent) and 2.5% by weight of the VOC (solvent) evaporating.

The VOC solvent usage per twelve (12) consecutive month period with compliance determined at the end of each month shall be adjusted when more than one type of binder is used. In order to determine the tons of VOC emitted per each type of binder, use the following formula and divide the tons of VOC solvent used for each type of binder by the corresponding adjustment ratio.

$$\frac{\text{Tons of solvent contained in binder}}{\text{Adjustment ratio}} = \text{tons of VOC emitted}$$

Adjustment Ratio: cutback asphalt rapid cure= 1.0; cutback asphalt medium cure = 1.36; cutback asphalt slow cure = 3.8; emulsified asphalt = 2.04; other asphalt = 38.

Total VOC emissions from the cold mix storage operations shall not exceed 80.15 tons per twelve (12) consecutive month period with compliance determined at the end of each month. Compliance with this condition will limit source-wide VOC to less than 100 tons per 12 consecutive month period with compliance determined at the end of each month. Therefore, the requirements of 326 IAC 2-7 (Part 70) are not applicable.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.2.3 Record Keeping Requirements

To document compliance with Condition D.2.2, the Permittee shall maintain records in accordance with (a) through (d) below. Records maintained for (a) through (d) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limit established in Condition D.2.2.

- (a) Calendar dates covered in the compliance determination period;
- (b) Cold-mix (stock pile mix) asphalt binder usage per month since the last compliance determination period;
- (c) VOC solvent content by weight of the cold-mix (stock pile mix) asphalt binder used each month; and
- (d) Amount of VOC solvent used in the production of cold mix asphalt, and the amount of VOC emitted each month.

All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.4 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.2.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.3

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

The source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

Plant #1

- (a) One (1) 30,000 gallon liquid storage tank (ID No. T-01), constructed in 1990.
- (b) One (1) 20,000 gallon liquid asphalt storage tank (ID No. T-02), constructed in 1990.

Plant #2

- (c) Two (2) 30,000 gallon liquid asphalt storage tanks (ID Nos. T-03 and T-04), constructed in 1999.
- (d) One (1) 15,000 gallon liquid asphalt storage tank (ID No. T-05), constructed in 1999.
- (e) One (1) 25,000 gallon No. 2 distillate or No. 6 residual fuel oil storage tank (ID No. T-06), constructed in 1999.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.3.1 Record Keeping Requirements [326 IAC 12] [40 CFR 60.110b, Subpart Kb]

Pursuant to the New Source Performance Standard (NSPS), 326 IAC12 and 40 CFR Part 60.116 Subpart Kb, the Permittee shall maintain permanent accessible records at the source for the life of each volatile liquid storage tank as follows:

- (a) the dimension of each storage vessel;
- (b) an analysis showing the capacity of each storage vessel; and
- (c) the true vapor pressure of the VOC stored in each storage vessel, to be less than 15.0 kPa.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION**

Source Name: Sellersburg Stone Co. Inc.
Source Address: 1019 East Utica Street, Sellersburg, IN 47172
Mailing Address: P.O. Box D, Sellersburg, IN 47172
FESOP No.: F019-15036-03109

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

- 9 Annual Compliance Certification Letter
- 9 Test Result (specify) _____
- 9 Report (specify) _____
- 9 Notification (specify) _____
- 9 Affidavit (specify) _____
- 9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
P.O. Box 6015
100 North Senate Avenue
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT**

Source Name: Sellersburg Stone Co. Inc.
Source Address: 1019 East Utica Street, Sellersburg, IN 47172
Mailing Address: P.O. Box D, Sellersburg, IN 47172
FESOP No.: F019-15036-03109

This form consists of 2 pages

Page 1 of 2

- 9** This is an emergency as defined in 326 IAC 2-7-1(12)
 CThe Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
 CThe Permittee must submit notice in writing or by facsimile within two (2) days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:

Control Equipment:

Permit Condition or Operation Limitation in Permit:

Description of the Emergency:

Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO ₂ , VOC, NO _x , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____
Title / Position: _____
Date: _____
Phone: _____

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

FESOP Quarterly Report

Source Name: Sellersburg Stone Co. Inc.
Source Address: 1019 East Utica Street, Sellersburg, IN 47172
Mailing Address: P.O. Box D, Sellersburg, IN 47172
FESOP No.: F019-15036-03109
Facility: Plant # 2 aggregate dryer burner
Parameter: Fuel oil consumption limitations based on SO₂ emissions
Limit: The input of No. 6 residual fuel oil and No. 6 residual fuel oil equivalents in the 116 MMBtu per hour burner for the aggregate dryer shall be limited to 755,025 gallons per twelve (12) consecutive month period with compliance determined at the end of each month, so that SO₂ emissions are limited below 100 tons per year.

YEAR: _____

Month	No.6 (+ equivalents) usage this month (gallons per month)	No.6 (+ equivalents) usage for previous 11 months (gallons)	No.6 (+ equivalents) usage for last 12 months (gallons)
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.

Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

FESOP Quarterly Report

Source Name: Sellersburg Stone Co. Inc.
Source Address: 1019 East Utica Street, Sellersburg, IN 47172
Mailing Address: P.O. Box D, Sellersburg, IN 47172
FESOP No.: F019-15036-03109
Facility: Plants #1 and #2 aggregate dryer burners
Parameter: Fuel oil consumption limitations based on NOx emissions
Limit: The input of natural gas and natural gas equivalents to the two (2) dryer burners shall be limited to 1005.14 million cubic feet (MMCF) per twelve (12) consecutive month period with compliance determined at the end of each month, so that NOx emissions are limited below 100 tons per year.

YEAR: _____

Month	natural gas (+ equivalents) usage this month (MMCF per month)	natural gas (+ equivalents) usage previous 11 months (MMCF)	natural gas (+ equivalents) usage for last 12 months (MMCF)
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.

Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

FESOP Quarterly Report

Source Name: Sellersburg Stone Co. Inc.
Source Address: 1019 East Utica Street, Sellersburg, IN 47172
Mailing Address: P.O. Box D, Sellersburg, IN 47172
FESOP No.: F019-15036-03109
Facility: Plants #1 and #2 aggregate dryer burners
Parameter: Particulate Matter
Limit: The combined total production of asphalt mix in Plant #1 and Plant #2 shall be limited to 4,000,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR: _____

Month	Asphalt mix produced this month (tons)	Asphalt mix produced previous 11 months (tons)	12 month total asphalt mix produced (tons)
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.

Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

FESOP Quarterly Report

Source Name: Sellersburg Stone Co. Inc.
Source Address: 1019 East Utica Street, Sellersburg, IN 47172
Mailing Address: P.O. Box D, Sellersburg, IN 47172
FESOP No.: F019-15036-03109
Facility: Cold-mix cutback asphalt
Parameter: VOC emissions from binder used in the production of cold mix asphalt
Limit: VOC: 80.15 tons per twelve (12) consecutive month period with compliance determined at the end of each month, and calculated as follows:

Sum of (Tons of solvent contained in binder) different binders = tons of VOC emitted
Adjustment ratio

Adjustment Ratio: cutback asphalt rapid cure= 1.0; cutback asphalt medium cure = 1.36; cutback asphalt slow cure = 3.8; emulsified asphalt = 2.04; other asphalt = 38.

YEAR: _____

Month	VOC Emissions (Tons per Month)	VOC Emissions Previous 11 Months (Tons)	VOC Emissions Last 12 Months (Tons)
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Sellersburg Stone Co. Inc.
Source Address: 1019 East Utica Street, Sellersburg, IN 47172
Mailing Address: P.O. Box D, Sellersburg, IN 47172
FESOP No.: F019-15036-03109

Months: _____ to _____ Year: _____

Page 1 of 2

This report is an affirmation that the source has met all the requirements stated in this permit. This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document for a Federally Enforceable State Operating Permit (FESOP) Renewal

Source Name: Sellersburg Stone Company, Inc.
Source Location: 1019 East Utica Street, Sellersburg, IN 47172
County: Clark
SIC Code: 2951
Operation Permit No.: F019-15036-03109
Permit Reviewer: Adeel Yousuf/EVP

On July 17, 2002, the Office of Air Quality (OAQ) had a notice published in the Clark County Evening News in Sellersburg, Indiana, stating that Sellersburg Stone Company, Inc. had applied for a Federally Enforceable State Operating Permit (FESOP) Renewal relating to the operation of a stationary hot mix asphalt source. The notice also stated that OAQ proposed to issue a FESOP Renewal for this operation and provided information on how the public could review the proposed FESOP Renewal and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this FESOP Renewal should be issued as proposed.

Upon further review, the OAQ has decided to make the following changes to the FESOP Renewal. Bolded language has been added and the language with a line through it has been deleted.

Condition D.1.4 is being revised to clarify that the PM and PM-10 emission limits does not represent a one combined limit for both plant but the limits are applicable to each aggregate dryer or plant individually.

D.1.4 Particulate Matter (PM and PM-10) [326 IAC 2-2][40 CFR 52.21][326 IAC 2-8-4]

The source shall comply as follows:

- (a) The combined total production of asphalt mix in Plant # 1 and Plant # 2 shall be limited to 4,000,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month..
- (b) Based on the production limit in (a), the PM emissions from ~~two (2)~~ **each** drum-mix aggregate mixing and drying operations shall be limited to 0.04167 pounds of PM emitted per ton of asphalt produced, equivalent to less than 12.69 pounds per hour (equivalent to 55.57 tons per year) from the drum-mix aggregate dryer at plant # 1 (SV1) and less than 6.34 pounds per hour (equivalent to 27.78 tons per year) from the drum-mix aggregate dryer at plant # 2 (SV2-1).
- (c) PM-10 emissions from the ~~two (2)~~ **each** drum-mix aggregate mixing and drying operations shall be limited to 0.029 pounds of PM10 emitted per ton of asphalt produced (based on annual asphalt production limit of 4,000,000 tons per year), equivalent to less than 8.80 pounds per hour (equivalent to 38.54 tons per year) from the drum-mix aggregate dryer at Plant # 1 (SV1), and less than 4.40 pounds per hour (equivalent to 19.27 tons per year) from the drum-mix aggregate dryer at Plant #2 (SV2-1).

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Federally Enforceable State Operating Permit (FESOP) Renewal

Source Background and Description

Source Name: Sellersburg Stone Company, Inc.
Source Location: 1019 East Utica Street, Sellersburg, IN 47172
County: Clark
SIC Code: 2951
Operation Permit No.: F019-15036-03109
Permit Reviewer: Adeel Yousuf/EVP

The Office of Air Quality (OAQ) has reviewed a FESOP renewal application from Sellersburg Stone Company, Inc. relating to the operation of a stationary hot mix asphalt producing source. Sellersburg Stone Company, Inc. was issued FESOP F003-5405-03112 on December 9, 1996.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

Plant # 1:

- (a) One (1) aggregate drum-mix dryer (Unit #2), installed in 1998, with a maximum capacity of 600 tons per hour, equipped with one (1) natural gas fired aggregate dryer burner, with a maximum rated capacity of 200 million British thermal units (MMBtu) per hour, using one (1) baghouse for particulate matter control, and exhausting at one (1) stack identified as SV1.
- (b) One (1) 30,000 gallon liquid storage tank (ID No. T-01), constructed in 1990.
- (c) One (1) 20,000 gallon liquid asphalt storage tank (ID No. T-02), constructed in 1990.

Plant # 2:

- (d) One (1) aggregate drum-mix dryer (Unit # 1), installed in 1999, with a maximum capacity of 300 tons per hour, equipped with one (1) dryer burner fired either by natural gas, No. 2 distillate or No. 6 residual fuel oil with a maximum heat input capacity of 116 million British thermal unit (MMBtu) per hour, using one (1) baghouse for particulate matter control, and exhausting at one (1) stack identified as SV2-1.
- (e) Two (2) 30,000 gallon liquid asphalt storage tanks (ID Nos. T-03 and T-04), constructed in 1999.
- (f) One (1) 15,000 gallon liquid asphalt storage tank (ID No. T-05), constructed in 1999.
- (g) One (1) 25,000 gallon No. 2 distillate or No. 6 residual fuel oil storage tank (ID No. T-06), constructed in 1999.
- (h) Cold-mix cutback asphalt manufacturing operation.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) One (1) natural gas fired hot oil heater, rated at 5.0 MMBtu/hr and exhausting to stack SV2.
- (b) One (1) natural gas fired heater, rated at 1.4 MMBtu/hr and exhausting through stack SV2-2.
- (c) One (1) natural gas fired hot oil heater, rated at 1.5 MMBtu/hr.
- (d) Replacement or repair of electrostatic precipitators, bags in baghouses, and filters in other air filtration equipment.
- (e) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (f) One (1) material storage and handling process, with a maximum storage capacity of 15,000 tons for limestone, 10,000 tons for sand, and 2,000 tons for reclaimed asphalt pavement (RAP), utilizing a wetting system for particulate control.
- (g) Two (2) cold feed storage bins with belt feeders. Each bin has maximum capacity of 32 tons of virgin aggregate. The belt feeders have a maximum capacity of 300 tons per hour.

Existing Approvals

- (a) FESOP 019-5424-03109, issued on December 9, 1996; and expired on December 9, 2001;
- (b) First Minor Modification 019-8782-03109, issued on October 14, 1997;
- (c) Second Minor Modification 019-9865-03109, issued on September 14, 1998;
- (d) First Significant Modification 019-9885-03109, issued on October 28, 1998;
- (e) First Significant Permit Revision: 019-11077-03109, issued on October 25, 1999;
- (f) First Administrative Amendment 019-11859-03109, issued on March 22, 2000; and
- (g) Second Significant Permit Revision 019-13962-03109, issued on August 30, 2001.

All conditions from previous approvals were incorporated into this FESOP except the following:

- (a) FESOP 019-5424-03109, issued on December 9, 1996.

Condition: D.1.6 (Daily Visible Emissions Notations)

Reason Changed: The frequencies for visible emission notations and baghouse pressure drop readings are being changed from daily to once per shift. Compliance monitoring conditions are in the permit in order to ensure continuous compliance with the requirements. Baghouse failure can occur suddenly; therefore monitoring of baghouse operational parameters should be more frequent than weekly or even daily in such cases where a source operates more than one shift per day. The OAQ believes that changing visible emissions notations to once per operating shift is a reasonable requirement. Therefore, the requirements to perform visible emissions notations have been changed from weekly to once per shift.

(b) Second Significant Permit Revision 019-13962-03109, issued on August 30, 2001.

Condition: Fuel oil (No. 2 and No. 6) combustion emission factors

Reason changed: Fuel oil combustion emission factors for criteria pollutants have been updated for one (1) drum dryer/mixer at plant # 2, previously used emission factors were based on older version of AP-42. These new emission factors are based on the latest AP-42 (9/98) fuel oil emission factors listed in section 1.3 (table 1.3-1).

Recommendation

The staff recommends to the Commissioner that the FESOP Renewal be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete FESOP Renewal application for the purposes of this review was received on November 5, 2001.

There was no notice of completeness letter mailed to the source.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (pages 1 through 14).

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source, excluding the emission limits that were contained in the previous FESOP.

Pollutant	Unrestricted Potential Emissions (tons/yr)
PM	110,771
PM-10	25,766
SO ₂	889
VOC	88,328
CO	119
NO _x	329

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's	Unrestricted Potential Emissions (tons/yr)
Arsenic	less than 10
Benzene	less than 10
Beryllium	less than 10
Cadmium	less than 10
Chromium	less than 10
Ethylbenzene	less than 10
Formaldehyde	greater than 10
Hexane	less than 10
Isooctane	less than 10
Methyl chloroform	less than 10
Lead	less than 10
Manganese	less than 10
Mercury	less than 10
Nickel	less than 10
PAH (total) HAPs	less than 10
Toluene	greater than 10
Xylene	less than 10
TOTAL	greater than 25

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of particulate matter with aerodynamic diameter at or below 10 microns (PM-10), sulfur dioxide (SO₂), volatile organic compounds (VOC), nitrogen oxides (NO_x) and carbon-monoxide (CO) are each equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) Fugitive Emissions
Since there is an applicable New Source Performance Standard that was in effect on August 7, 1980 for this source category, the fugitive particulate emissions are counted toward determination of PSD and Emission Offset applicability.

Potential to Emit After Issuance

The source, issued a FESOP on December 13, 1996, has opted to remain a FESOP source, rather than apply for a Part 70 Operating Permit. The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered enforceable only after issuance of this Federally Enforceable State Operating Permit and only to the extent that the effect of the control equipment is made practically enforceable in the permit. Since the source constructed new emission units, the source's potential to emit is based on the emission units included in the Second Significant Permit Revision. (SSPR 019-13962-03109; issued on August 30, 2001).

	Potential to Emit After Issuance (tons/year)						
Process/emission unit	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
Dryer/Burner & Mixer (SV1 and SV2-1) ⁽¹⁾	83.35 ⁽²⁾	57.80 ⁽³⁾	98.98	18.61	42.51	95.49	6.20 (single HAP)
Conveying/Handling ⁽⁴⁾	5.16	2.44	-	-	-	-	-
Storage Piles ⁽⁴⁾	0.25	0.09	-	-	-	-	-
Unpaved Roads ⁽⁴⁾	159.97	38.41	-	-	-	-	-
Coldmix Operation	-	-	-	80.15	-	-	-
Hot oil heater (as insignificant activity)	0.27	0.27	0.01	0.20	0.51	3.51	negl.
Total PTE After Issuance	249	99	99	99	43.02	99	15.90 (total HAP)

(1) Reflects fuel limit of Conditions D.1.5 and D.1.6.

(2) Reflects the 326 IAC 2-2 (PSD) limit of Condition D.1.2.

(3) Based on Condition D.1.4.

(4) Potential to emit after controls.

County Attainment Status

The source is located in Clark County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	maintenance
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Clark County has been designated as maintenance for ozone.

Federal Rule Applicability

There are no new federal rules applicable to the source during this FESOP review process. The applicability determination that follows is based on that conducted for original FESOP F019-5425-03109, issued on December 9, 1996.

- (a) This source is subject to the New Source Performance Standard (NSPS), 326 IAC 12, (40 CFR 60.90, Subpart I) because it meets the definition of a hot mix asphalt facility pursuant to the rule and it was constructed after June 11, 1973. Pursuant to the New Source Performance Standards, 326 IAC 12 (40 CFR 60.90 to 60.93, Subpart I), the source shall continue to comply as follows:

- (1) particulate matter emissions from the drum-mix asphalt plants shall not exceed 0.04 grains per dry standard cubic foot (gr/dscf), and
- (2) the visible emissions from each plant shall not exceed 20 percent opacity.

This particulate matter emission limitation is equivalent to 21.01 pounds per hour (lb/hr) based on an exhaust rate of 90,000 actual cubic feet per minute (acfm) and an exhaust temperature of 300 degrees Fahrenheit (EF) for the drum-mix plant # 1 (SV1), and 13.97 lb/hr based on an exhaust rate of 58,255 acfm and an exhaust temperature of 280EF for the drum-mix plant # 2 (SV2-1).

The source will comply with this rule by using a baghouse to limit particulate matter emissions to less than 0.04 gr/dscf (see Appendix A, page 10 of 14, for detailed calculations).

- (b) One (1) 30,000 gallon liquid asphalt storage tank and one (1) 20,000 gallon liquid storage tank at plant # 1, both installed in 1990 are subject to subpart Kb because the tanks have storage capacities of greater than 40 cubic meters (m^3) (10,567 gallons). Since the tanks' capacities are between 75 m^3 (19,813 gallons) and 151 m^3 (39,890 gallons), these tanks are exempt from all other provisions of this Subpart except 60.116b, which requires that permanent records be maintained.
- (c) Two (2) 30,000 gallon liquid asphalt storage tanks, one (1) 15,000 gallon liquid storage tank, and one (1) 25,000 gallon No. 2 distillate or No. 6 residual fuel oil storage tank at plant # 2, all installed in 1999 are subject to subpart Kb because the tanks have storage capacities of greater than 40 cubic meters (m^3) (10,567 gallons). Since the tanks' capacities are between 75 m^3 (19,813 gallons) and 151 m^3 (39,890 gallons), these tanks are exempt from all other provisions of this Subpart except 60.116b, which requires that permanent records be maintained.
- (d) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 61) applicable to this source.
- (e) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 20 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

There are no new state rules applicable to this source during this FESOP renewal review process. The applicability determination that follows is based on that conducted for original FESOP 019-5424-03109; issued on December 9, 1996.

326 IAC 2-2 and 40 CFR 52.21 (Prevention of Significant Deterioration, PSD)

Pursuant to 326 IAC 2-2 and 40 CFR 52.21 (PSD), this source, consisting of two (2) drum-mix dryers (Unit # 1 & # 2) respectively installed in 1999 and 1998, after the 326 IAC 2-2 August 7, 1980 rule applicability date, is still not considered a major source because it is not one of the 28 listed source categories and shall continue to be limited pursuant to 326 IAC 2-8-4 and is as follows: The combined total production of asphalt mix in Plant # 1 and Plant # 2 shall be limited to 4,000,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month. Based on this production limit, the PM emissions from two (2) drum-mix aggregate mixing and drying operations shall be limited to less than 12.69 pounds per hour (equivalent to 55.57 tons per year) from the drum-mix aggregate dryer at plant # 1 (SV1) and less than 6.34 pounds per hour (equivalent to 27.78 tons per year) from the drum-mix aggregate dryer at plant # 2 (SV2-1), which is equivalent to the emission factor of 0.04167 pounds PM per ton of asphalt produced. These limits are required to limit the source-wide potential to emit of PM and PM-10 to less than 250 and 100 tons per twelve (12) consecutive month period, respectively, such that the requirements of 326 IAC 2-2 and 40 CFR 52.21 (Prevention of Significant Deterioration, PSD) are not applicable. SO₂, VOC, NO_x and PM-10 shall be limited as described under the *FESOP* section below.

326 IAC 2-4.1-1 (New Source Toxics Control)

Pursuant to 326 IAC 2-4.1-1 (New Source Toxics Control), any new process or production unit, which in and of itself emits or has the PTE 10 tons per year of any HAP or 25 tons per year of the combination of HAPs, and is constructed or reconstructed after July 27, 1997, must be controlled using technologies consistent with Maximum Achievable Control Technology (MACT). The two (2) drum-mix dryers (Unit # 1 & # 2, constructed in 1999 and 1998, respectively) were constructed after the July 1997 rule applicability date at this source with the PTE of any single HAP and combination HAPs at greater than 10 and 25 tons per year, respectively. However, the annual asphalt production limit of 4,000,000 tons to limit PM emissions under 326 IAC 2-2 (PSD) rule shall also limit the source wide emissions of any single HAP and combination of HAPs to less than 10 and 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month, respectively. Therefore, the requirements of 326 IAC 2-4.1-1 do not apply.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it is located in Clark County, a specifically listed county and has the potential to emit more than ten (10) tons per year of VOC and NO_x. Pursuant to this rule, the owner/operator of the source must submit an emission statement for the source. The statement must be received in accordance with the compliance schedule specified in 326 IAC 2-6 and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8).

326 IAC 2-8-4 (FESOP)

SO₂, NO_x, PM-10, CO and VOC emissions will need to be limited to make this a FESOP source.

- (a) The input of No. 6 residual fuel oil and No. 6 residual fuel oil equivalents in the 116 MMBtu per hour burner for the aggregate dryer shall be limited to 755,025 gallons per twelve (12) consecutive month period with compliance determined at the end of each month, so that SO₂ emissions are limited below 100 tons per year. For purposes of determining compliance, the following shall apply:
 - Every gallon of No. 2 distillate fuel oil burned shall be equivalent to 0.30 gallons of No. 6 residual fuel oil based on SO₂ emissions, such that the total input of No. 2 distillate fuel oil and No. 2 distillate fuel oil equivalent input does not exceed the limit specified.
- (b) Sulfur content of No. 2 distillate fuel oil shall not exceed 0.5% by weight.
- (c) Sulfur content of No. 6 residual fuel oil shall not exceed 1.67% by weight.
- (d) The total input of natural gas and natural gas equivalents in the 200 MMBtu per hour burner (plant # 1) and 116 MMBtu per hour burner (plant # 2) for the aggregate dryer shall be limited to 1005.14 million cubic feet (MMCF) per twelve (12) consecutive month period with compliance determined at the end of each month, so that NO_x emissions are limited below 100 tons per year. For purposes of determining compliance, the following shall apply:
 - (1) Every 1,000 gallons of No. 2 distillate fuel oil burned shall be equivalent to 0.1263 MMCF of natural gas based on NO_x emissions, such that the total input of natural gas and natural gas equivalent input does not exceed the limit specified.
 - (2) Every 1,000 gallons of No. 6 residual fuel oil burned shall be equivalent to 0.2474 MMCF of natural gas based on NO_x emissions, such that the total input of natural gas and natural gas equivalent input does not exceed the limit specified.
- (e) Limiting the usage of No. 6 residual fuel oil and natural gas to 755,025 gallons and 1005.14 MMCF per year, respectively, to limit NO_x and SO₂ emissions to less than 100 tons per year will automatically limit source wide CO emissions to 44.61 tons per year (see Appendix A).
- (f) PM-10 emissions from the two (2) drum-mix aggregate mixing and drying operations shall be limited to 0.029 pounds of PM10 emitted per ton of asphalt produced, based on annual sourcewide asphalt production limit of 4,000,000 tons per year, which is equivalent to less than 8.80 pounds per hour (equivalent to 38.54 tons per year) from the drum-mix aggregate dryer at Plant # 1 (SV1), and less than 4.40 pounds per hour (equivalent to 19.27 tons per year) from the drum-mix aggregate dryer at Plant #2 (SV2-1). These limits are required to limit the source-wide potential to emit of PM-10 to less than 100 tons per twelve (12) consecutive month period, such that the requirements of 326 IAC 2-7 (Part 70) are not applicable.

- (g) Liquid binders used in the production of cold mix asphalt at this source consist of rapid cure, medium cure, slow cure, emulsified and gelled asphalt and are defined as follows:
- (1) Cut back asphalt rapid cure, containing a maximum of 25.3% of the liquid binder by weight of VOC (solvent) and 95% by weight of VOC (solvent) evaporating.
 - (2) Cut back asphalt medium cure, containing a maximum of 28.6% of the liquid binder by weight of VOC (solvent) and 70% by weight of VOC (solvent) evaporating.
 - (3) Cut back asphalt slow cure, containing a maximum of 20% of the liquid binder by weight of VOC (solvent) and 25% by weight of VOC (solvent) evaporating.
 - (4) Emulsified asphalt with solvent, containing a maximum of 15% of liquid binder by weight of VOC solvent and 46.4% by weight of the VOC (solvent) in the liquid blend evaporating. The percent oil distillate in emulsified asphalt with solvent liquid, as determined by ASTM, must be 7% or less of the total emulsion by volume.
 - (5) Other asphalt with solvent binder, containing a maximum 25.9% of the liquid binder of VOC (solvent) and 2.5% by weight of the VOC (solvent) evaporating.

The VOC solvent usage per twelve (12) consecutive month period with compliance determined at the end of each month, shall be adjusted when more than one type of binder is used. In order to determine the tons of VOC emitted per each type of binder, use the following formula and divide the tons of VOC solvent used for each type of binder by the corresponding adjustment ratio.

$$\frac{\text{Tons of solvent contained in binder}}{\text{Adjustment ratio}} = \text{tons of VOC emitted}$$

Adjustment Ratio: cutback asphalt rapid cure= 1.0; cutback asphalt medium cure = 1.36; cutback asphalt slow cure = 3.8; emulsified asphalt = 2.04; other asphalt = 38.

Total VOC emissions from the cold mix storage operations shall not exceed 80.15 tons per twelve (12) consecutive month period with compliance determined at the end of each month (based on: 99.0 - VOC emissions from aggregate drying and fuel combustion). Compliance with this condition will limit source-wide VOC to less than 100 tons per 12 consecutive month period. Therefore, the requirements of 326 IAC 2-7 (Part 70) are not applicable.

326 IAC 5-1 (Opacity Limitations)

This source is not located in Jeffersonville township, Clark county. Therefore, pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-4 (Fugitive Dust Emissions)

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

326 IAC 6-5 (Fugitive Particulate Matter Emissions Limitations)

This source is subject to 326 IAC 6-5, for fugitive particulate matter emissions. Pursuant to 326 IAC 6-5, for any new source which has not received all the necessary preconstruction approvals before December 13, 1985, a fugitive dust control plan must be submitted, reviewed and approved. The source shall continue to comply with all the dust abatement measures of the dust control plan submitted on March 13, 1996 consisting the following:

- (a) Fugitive particulate matter emissions from plant roadways, parking lots and yards shall be controlled by the following methods:
 - (1) application of water and/or water-dust control material solutions on an as needed basis;
 - (2) sweeping between watering on an as needed basis; and
 - (3) limiting vehicular speeds to 10 miles per hour.
- (b) Fugitive particulate matter emissions from conveying/handling operations shall be controlled by the following methods:
 - (1) utilizing a water spray system at strategic transfer locations; and
 - (2) minimizing all drop distances.
- (c) Fugitive particulate matter emissions from storage piles shall be controlled by the following methods:
 - (1) watering storage piles on an as needed basis;
 - (2) minimizing drop distances; and
 - (3) maintaining moisture contents of materials above 1.5%.

State Rule Applicability - Individual Facilities

There are no new state rules applicable to the individual facilities during this FESOP review process. The applicability determination that follows is based on that conducted for original FESOP F019-5424-03109, issued on December 13, 1996.

326 IAC 6-1-2 (Particulate Emissions Limitations)

This rule applies to sources or facilities located in specifically listed counties under 326 IAC 6-1-7, and have the potential to emit one hundred (100) tons or more of particulate matter per year or have actual emissions of ten (10) tons or more of particulate matter per year. This is a stationary source with the potential to emit one hundred (100) tons or more of particulate matter per year located in Clark County, a specifically listed county, therefore, this rule applies. The rule requires that the particulate matter emissions be limited to 0.03 gr/dscf. This particulate matter emission limitation is equivalent to 15.60 pounds per hour (lb/hr) based on an exhaust rate of 90,000 actual cubic feet per minute (acfm) and an exhaust temperature of 300 degrees Fahrenheit (EF) for the drum-mix at plant # 1 (SV1), and 10.47 lb/hr based on an exhaust rate of 58,255 acfm and an exhaust temperature of 280EF for the drum-mix at plant # 2 (SV2-1). However, since the PM limit established by 326 IAC 2-2 (PSD) (12.7 and 6.3 lb/hr, for SV1 and SV2-1, respectively) is less than the PM limit that would be established by 326 IAC 6-1-2 (see Appendix A, page 10 of 14), the more stringent 326 IAC 2-2 (PSD) limit applies.

326 IAC 6-3-2 (Process Operations)

The aggregate mixing and drying operation is not subject to the requirements of 326 IAC 6-3-2, since the applicable PM limits established by 326 IAC 6-1-2 are more stringent than the PM limits that would be established by 326 IAC 6-3-2. The more stringent limits apply and the limits pursuant to 326 IAC 6-3-2 do not apply.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

As facilities with a potential to emit (PTE) of sulfur dioxide (SO₂) at or greater than 25 tons per year, the 116 MMBtu per hour dryer burner is subject to the requirements of 326 IAC 7-1.1. Therefore, pursuant to 326 IAC 7-1.1 (SO₂ Emissions Limitations), sulfur dioxide emissions from the 116 million British thermal units per hour burner for the aggregate drum mix dryer (plant # 2) shall be limited to 0.5 pound per MMBtu heat input when using No. 2 distillate oil and shall be limited to 1.6 pound per MMBtu heat input when using No. 6 residual fuel oil. This is equivalent to the following maximum allowable sulfur contents of the following fuels: No. 2 distillate fuel oil (0.5%) and No. 6 residual fuel oil (1.67%), (see Appendix A: Emission Calculations, page 10 of 14). All fuels used by the drum dryer are in compliance with the aforementioned sulfur content limits, therefore the drum mix dryer is in compliance with this rule.

326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements)

Pursuant to this rule, the source shall submit reports of calendar month average sulfur content, heat content, fuel consumption, and sulfur dioxide emission rate (pounds SO₂ per MMBtu), to the OAQ upon request.

326 IAC 8-5-2 (Miscellaneous Operations: Asphalt Paving)

Pursuant to 326 IAC 8-5-2 (Miscellaneous Operations: Asphalt Paving), the use of cutback asphalt or asphalt emulsion shall not contain more than seven percent (7%) oil distillate by volume of emulsion for any paving application except the following purposes:

- (a) penetrating prime coating
- (b) stockpile storage

- (c) application during the months of November, December, January, February and March.

326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)

Pursuant to 326 IAC 8-4-1 (Applicability) and 326 IAC 8-4-3 (Petroleum Liquid Storage Facilities), all petroleum liquid storage vessels with capacities greater than one hundred fifty thousand (150,000) liters (39,000 gallons) containing VOC whose true vapor pressure is greater than 10.5 kPa (1.52 psi) shall comply with the requirements for external fixed and floating roof tanks and the specified record keeping and reporting requirements. The three (3) 30,000 gallon liquid asphalt storage tanks, one (1) 20,000 gallon liquid asphalt storage tank, one (1) 15,000 gallon liquid storage tank, and the 25,000 gallon No. 2 distillate or No. 6 residual fuel oil storage tank are not subject to IAC 8-4-3 because their capacities are less than the rule applicability threshold capacity of 39,000 gallons.

326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark and Floyd Counties)

The requirements of this rule apply to stationary sources located in Lake, Porter, Clark and Floyd Counties that emit or have the potential to emit VOCs at levels equal to or greater than 25 tons per year in Lake and Porter Counties; 100 tons per year in Clark and Floyd Counties; and to any coating facility that emits or has the potential to emit 10 tons per year or greater in Lake, Porter, Clark or Floyd County. This source is located in Clark County. The source has limited potential to emit VOC to less than 100 tons per year. Therefore, this rule does not apply.

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)

Pursuant to 326 IAC 8-9-1, on and after October 1, 1995 stationary vessels used to store volatile organic liquids (VOL) must comply with the requirement of the rule if located in Clark, Floyd, Lake or Porter Counties. Stationary vessels with capacities less than 39,000 gallons are only subject to the reporting and record keeping requirements of the rule. Stationary storage vessels subject to any provision of 40 CFR Part 60.110b, New Source Performance Standard for Volatile Organic Liquid Storage, are exempt from this rule. The three (3) 30,000 gallon liquid asphalt storage tanks, one (1) 20,000 gallon liquid asphalt storage tank, one (1) 15,000 gallon liquid storage tank, and the 25,000 gallon No. 2 distillate or No. 6 residual fuel oil storage tank are not subject to 326 IAC 8-9 because they are subject to the provision of 40 CFR Part 60.110b, Subpart Kb New Source Performance Standard for Volatile Organic Liquid Storage.

326 IAC 8-1-6 (General Volatile Organic Compound Reduction Requirements)

This rule applies to facilities located anywhere in the state that were constructed on or after January 1, 1980, which have potential volatile organic compound (VOC) emissions of 25 tons per year or more, and which are not otherwise regulated by another provision of Article 8. Both drum-mix dryers (Unit # 1 & # 2, constructed in 1999 and 1998, respectively) were constructed after the January 1, 1980 rule applicability and each has maximum uncontrolled VOC potential emission less than 25 tons per year. Therefore, this rule does not apply.

Testing Requirements

All testing requirements from previous approvals were incorporated into this FESOP. This source is subject to 40 CFR 60, Subpart I (Standards of Performance for Hot Mix Asphalt Facilities), and shall comply with the particulate matter (PM) and opacity compliance testing requirements of the rule for both the drum-mix and batch-mix plants. OAQ has also required PM-10 testing to demonstrate FESOP compliance.

Previous stack tests to comply with this requirement were conducted as follows:

- (a) PM and PM-10, and opacity testing was performed in August 1999.

A new opacity testing requirement has been incorporated into the existing testing condition D.1.9 of this FESOP, and the condition has been re-written for greater clarity as follows (new language in bold and stricken language with a line through it):

D.1.9 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

~~Within 180 days after issuance of Significant Modification No. 019-9885, the Permittee shall perform PM and PM-10 testing on the Plant #1 dryer/mixer exhaust, and within 60 days of reaching maximum capacity, but no longer than 180 days after startup, the Permittee shall perform PM and PM-10 testing on the Plant #2 dryer/mixer exhaust. These tests shall utilize Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensible PM-10. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance. During the period between 30 to 36 months after issuance of this permit, the Permittee shall perform the following to demonstrate compliance with Conditions D.1.2 and D.1.3 for the drum-mix aggregate dryers (plants #1 and #2):~~

- (a) PM and PM-10 testing utilizing methods per 40 CFR Part 60 Appendix A, Method 5 for PM and methods as approved by the Commissioner for PM-10. PM-10 includes filterable and condensible PM-10.**
- (b) Opacity testing utilizing 40 CFR Part 60 Appendix A, Method 9, to demonstrate compliance with the opacity limitation of Condition D.1.2.**

This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C-Performance Testing.

Justification for new testing requirement: The source is subject to the NSPS requirements of 40 CFR 60, Subpart I (Standards of Performance for Hot Mix Asphalt Facilities). As an affected source, compliance testing for opacity is required pursuant to the NSPS, but was not included in the testing condition original FESOP, even though an opacity test was performed in September 1999. This change completes the NSPS testing requirement.

Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

All compliance requirements from previous approvals were incorporated into this FESOP, except the frequencies for visible emission notations and baghouse pressure drop readings have been changed to once per shift.

Reason changed: Compliance monitoring conditions are in the permit in order to ensure continuous compliance with the requirements. Baghouse failure can occur suddenly; therefore monitoring of baghouse operational parameters should be more frequent than weekly or even daily in such cases where a source operates more than one shift per day. The OAQ believes that changing visible emissions notations to once per operating shift is a reasonable requirement. Therefore, the requirements to perform visible emissions notations have been changed from weekly to once per shift. This change likewise applies to the pressure drop readings. The compliance monitoring requirements applicable to this source are as follows:

1. The mixing and drying operations (plants #1 and #2) have applicable compliance monitoring conditions as specified below:
 - (a) Visible emissions notations of the two (2) drum-mix aggregate dryer/burner baghouse stack exhausts, and the conveyors and transfer points, shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee will record whether emissions are normal or abnormal.
 - (b) The Permittee shall record the total static pressure drop across each baghouse controlling the respective drum-mix aggregate dryers, at least once per shift when the respective aggregate dryer is in operation and venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across each baghouse shall be maintained within the range of 3.0 to 5.0 inches of water for the plant # 1 baghouse and 3.0 to 6.0 inches of water for the plant # 2 baghouse or a range established during the latest stack test.
 - (c) An inspection shall be performed each calendar quarter of all bags controlling the drum-mix aggregate mixing and drying operations when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.

These monitoring conditions are necessary because the baghouses for the aggregate mixing and drying process must operate properly to ensure compliance with 326 IAC 12, 40 CFR 60.90, Subpart I (Standards of Performance for Hot Mix Asphalt Facilities) and 326 IAC 2-8 (FESOP).

Conclusion

The operation of this stationary hot mix asphalt plant shall be subject to the conditions of the attached proposed FESOP No.: F019-15036-03109.

Company Name:
Plant Location:
County:
Date:
Permit Reviewer:

Sellersburg Stone Company
1019 E. Utica St., Sellersburg, IN 47172
Clark
April 15, 2002
Adeel Yousuf / EVP

**** general facility information ****

This source has the capability to operate a 600 ton/hr drum mix dryer with a dryer burner rated at 200 MMBtu/hr and a 300 ton/hr drum mix dryer with a dryer burner rated at 116 MMBtu/hr.

**** Three (3) natural gas fired hot oil heaters****

The following calculations determine the amount of emissions created by natural gas combustion, from hot oil heating, based on 8,760 hours of operation and US EPA's AP-42, 5th Edition, Section 1.4 - Natural Gas Combustion, Tables 1.4-1, 1.4-2, and 1.4-3.

Criteria Pollutant: 1 $\frac{5 \text{ MMBtu/hr} \times 8,760 \text{ hr/yr}}{1000 \text{ Btu/cf} \times 2,000 \text{ lb/ton}}$ * Ef (lb/MMcf) = (ton/yr)

P M:	7.6 lb/MMcf =	0.17 ton/yr
P M-10:	7.6 lb/MMcf =	0.17 ton/yr
S O 2:	0.6 lb/MMcf =	0.0131 ton/yr
N O x:	100.0 lb/MMcf =	2.19 ton/yr
V O C:	5.5 lb/MMcf =	0.12 ton/yr
C O:	84.0 lb/MMcf =	1.84 ton/yr

Criteria Pollutant: 2 $\frac{1.5 \text{ MMBtu/hr} \times 8,760 \text{ hr/yr}}{1000 \text{ Btu/cf} \times 2,000 \text{ lb/ton}}$ * Ef (lb/MMcf) = (ton/yr)

P M:	7.6 lb/MMcf =	0.05 ton/yr
P M-10:	7.6 lb/MMcf =	0.05 ton/yr
S O 2:	0.6 lb/MMcf =	0.00 ton/yr
N O x:	100.0 lb/MMcf =	0.66 ton/yr
V O C:	5.5 lb/MMcf =	0.04 ton/yr
C O:	84.0 lb/MMcf =	0.55 ton/yr

Criteria Pollutant: 3 $\frac{1.4 \text{ MMBtu/hr} \times 8,760 \text{ hr/yr}}{1000 \text{ Btu/cf} \times 2,000 \text{ lb/ton}}$ * Ef (lb/MMcf) = (ton/yr)

P M:	7.6 lb/MMcf =	0.05 ton/yr
P M-10:	7.6 lb/MMcf =	0.05 ton/yr
S O 2:	0.6 lb/MMcf =	0.00 ton/yr
N O x:	100.0 lb/MMcf =	0.66 ton/yr
V O C:	5.5 lb/MMcf =	0.04 ton/yr
C O:	84.0 lb/MMcf =	0.55 ton/yr

**** drum-mix aggregate dryer burner****

The following calculations determine the amount of emissions created by natural gas combustion, from the aggregate dryer burner, based on 8,760 hours of operation and US EPA's AP-42, 5th Edition, Section 1.4 - Natural Gas Combustion, Tables 1.4-1, and 1.4- Max. Capacity = 600 tons / hr

Criteria Pollutant:	$\frac{200 \text{ MMBtu/hr} \times 8,760 \text{ hr/yr}}{1000 \text{ MMBtu/MMcf}}$	* Ef (lb/MMcf) = (ton/yr)
		* 2,000 lb/ton

P M:	1.9 lb/MMcf =	1.66 ton/yr
P M-10:	7.6 lb/MMcf =	6.66 ton/yr
S O 2:	0.6 lb/MMcf =	0.53 ton/yr
N O x:	190.0 lb/MMcf =	166.44 ton/yr
V O C:	5.5 lb/MMcf =	4.82 ton/yr
C O:	84.0 lb/MMcf =	73.58 ton/yr

**** drum-mix aggregate dryer burner****

The following calculations determine the amount of emissions created by natural gas combustion, from the aggregate dryer burner, based on 8,760 hours of operation and US EPA's AP-42, 5th Edition, Section 1.4 - Natural Gas Combustion, Tables 1.4-1, and 1.4- Max. Capacity = 300 tons / hr

Criteria Pollutant:	$\frac{116 \text{ MMBtu/hr} \times 8,760 \text{ hr/yr}}{1000 \text{ MMBtu/MMcf}}$	* Ef (lb/MMcf) = (ton/yr)
		* 2,000 lb/ton

P M:	1.9 lb/MMcf =	0.97 ton/yr
P M-10:	7.6 lb/MMcf =	3.86 ton/yr
S O 2:	0.6 lb/MMcf =	0.30 ton/yr
N O x:	190.0 lb/MMcf =	96.54 ton/yr
V O C:	5.5 lb/MMcf =	2.79 ton/yr
C O:	84.0 lb/MMcf =	42.68 ton/yr

The following calculations determine the amount of emissions created by the combustion of #2 distillate fuel oil @ 0.5 % sulfur, from the aggregate dryer burner, based on 8,760 hours of use and US EPA's AP-42, 5th Edition, Section 1.3 - Fuel Oil Combustion, Tables 1.3-1, 1.3-3, and 1.3-7.

Criteria Pollutant:	$\frac{116 \text{ MMBtu/hr} \times 8,760 \text{ hr/yr}}{140,000 \text{ Btu/gal}}$	* Ef (lb/1,000 gal) = (ton/yr)
		* 2,000 lb/ton

P M:	2.0 lb/1000 gal =	7.26 ton/yr
P M-10:	1.0 lb/1000 gal =	3.63 ton/yr
S O 2:	78.5 lb/1000 gal =	284.89 ton/yr
N O x:	24.0 lb/1000 gal =	87.10 ton/yr
V O C:	0.20 lb/1000 gal =	0.73 ton/yr
C O:	5.0 lb/1000 gal =	18.15 ton/yr

The following calculations determine the amount of emissions created by the combustion of #6 residual fuel oil @ 1.67 % sulfur, from the aggregate dryer burner, based on 8,760 hours of use and US EPA's AP-42, 5th Edition, Section 1.3 - Fuel Oil Combustion, Tables 1.3-1, 1.3-4, and 1.3-6.

Criteria Pollutant:	$\frac{116 \text{ MMBtu/hr} \times 8,760 \text{ hr/yr}}{150,000 \text{ Btu/gal}}$	* Ef (lb/1,000 gal) = (ton/yr)
		* 2,000 lb/ton

P M:	18.6 lb/1000 gal =	62.89 ton/yr
P M-10:	18.6 lb/1000 gal =	63.00 ton/yr
S O 2:	262.2 lb/1000 gal =	888.09 ton/yr
N O x:	47.0 lb/1000 gal =	159.20 ton/yr
V O C:	1.04 lb/1000 gal =	3.52 ton/yr
C O:	5.0 lb/1000 gal =	16.94 ton/yr

The maximum potential emissions from the 116 mmBtu/hr aggregate dryer burner due to fuel combustion:

Criteria Pollutant:		Worst Case Fuel
P M:	62.89 ton/yr	No. 6 Residual Fuel Oil
P M-10:	54.09 ton/yr	No. 6 Residual Fuel Oil
S O 2:	888.09 ton/yr	No. 6 Residual Fuel Oil
N O x:	159.20 ton/yr	No. 6 Residual Fuel Oil
V O C:	3.52 ton/yr	No. 6 Residual Fuel Oil
C O:	42.68 ton/yr	Natural Gas

Total maximum potential emissions from the aggregate dryer burners due to fuel combustion are the following:

Criteria Pollutant:	
P M:	64.56 ton/yr
P M-10:	60.74 ton/yr
S O 2:	888.62 ton/yr
N O x:	325.64 ton/yr
V O C:	8.34 ton/yr
C O:	116.26 ton/yr

**** aggregate drying: drum-mix plant ****

The following calculations determine the amount of worst case emissions created by aggregate drying before controls, based on 8,760 hours of use and USEPA's AP-42, 5th Edition, Section 11.1 - Hot Mix Asphalt Plants, Tables 11.1-3 and 11.1-8 for a drum mix dryer which has the capability of combusting either fuel oil or natural gas:

$$\text{Pollutant: } \frac{\text{Ef}}{2,000} \text{ lb/ton} \times 600 \text{ ton/hr} \times 8,760 \text{ hr/yr}$$

Criteria Pollutant:			
P M:	28	lb/ton =	73,584 ton/yr
P M-10:	6.5	lb/ton =	17,082 ton/yr
VOC:	7.95E-03	lb/ton =	21 ton/yr

The VOC emission factor represents the sum of the HAP emission factors from the dryer which were assumed to be VOC.

**** aggregate drying: drum-mix plant ****

The following calculations determine the amount of worst case emissions created by aggregate drying before controls, based on 8,760 hours of use and USEPA's AP-42, 5th Edition, Section 11.1 - Hot Mix Asphalt Plants, Tables 11.1-3 and 11.1-8 for a drum mix dryer which has the capability of combusting either fuel oil or natural gas:

$$\text{Pollutant: } \frac{\text{Ef}}{2,000} \text{ lb/ton} \times 300 \text{ ton/hr} \times 8,760 \text{ hr/yr}$$

Criteria Pollutant:			
P M:	28	lb/ton =	36,792 ton/yr
P M-10:	6.5	lb/ton =	8,541 ton/yr
VOC:	7.95E-03	lb/ton =	10 ton/yr

The VOC emission factor represents the sum of the HAP emission factors from the dryer which were assumed to be VOC.

Total maximum potential to emit from the aggregate drying (2 dryers combined) are the following:

Criteria Pollutant:	
P M:	110,376 ton/yr
P M-10:	25,623 ton/yr
V O C:	31.33 ton/yr

**** conveying / handling ****

The following calculations determine the amount of emissions created by material handling, based on 8,760 hours of use and AP-42, Section 13.2.4, Equation 1. The emission factors for calculating PM/PM10 emissions are calculated as follows:

PM/PM10 Emissions:

$$\begin{aligned} E &= k \cdot (0.0032) \cdot ((U/5)^{1.3}) / ((M/2)^{1.4}) \\ &= 2.62E-03 \text{ lb PM/ton} \\ &= 1.24E-03 \text{ lb PM-10/ton} \end{aligned}$$

where k = 0.74 (particle size multiplier for <30um)
0.35 (particle size multiplier for <10um)

U = 12 mph mean wind speed
M = 4.2 material moisture content (%)

$$\frac{900 \text{ ton/hr} \times 8,760 \text{ hr/yr} \times E_f \text{ (lb/ton of material)}}{2,000 \text{ lb/ton}} = \text{(ton/yr)}$$

Total PM Emissions: 10.31 tons/yr
Total PM10 Emissions: 4.88 tons/yr

**** unpaved roads ****

The following calculations determine the amount of emissions created by vehicle traffic on unpaved roads, based on 8,760 hours of use and AP-42, Section 13.2.2.2.

I. Dump Truck

$$15 \text{ trip/hr} \times 0.189 \text{ mile/trip} \times 2 \text{ (round trip)} \times 8,760 \text{ hr/yr} = 49,669 \text{ mile/yr}$$

$$\begin{aligned} E_f &= k \cdot [(s/12)^a] \cdot [(W/3)^b] / [(M_{dry}/0.2)^c] \cdot [(365-p)/365] \cdot (S/15) \\ &= 5.57 \text{ lb PM/mile} \\ &= 1.19 \text{ lb PM-10/mile} \end{aligned}$$

where k = 10 (particle size multiplier, PM30) (k= 2.6 for PM10)
s = 4.8 mean % silt content of unpaved plant roads
a = 0.8 Constant for PM30/PM-10
W = 21 tons, average vehicle weight
b = 0.5 Constant for PM30 (b = 0.4 for PM10)
Mdry = 0.2 surface material moisture content, % (default 0.2 (dry conditions) when using rainfall parameter)
c = 0.4 Constant for PM30 (c = 0.3 for PM10)
p = 125 number of days with at least 0.01 in of precipitation per year
S = 10 mph speed limit

$$\text{PM : } \frac{5.57 \text{ lb/mi} \times 49,669.2 \text{ mi/yr}}{2,000 \text{ lb/ton}} = 138.38 \text{ tons/yr}$$

$$\text{PM-10 : } \frac{1.19 \text{ lb/mi} \times 49,669.2 \text{ mi/yr}}{2,000 \text{ lb/ton}} = 29.62 \text{ tons/yr}$$

II. Front End Loader

$$79.2 \text{ trip/hr} \times 0.05 \text{ mile/trip} \times 2 \text{ (round trip)} \times 8,760 \text{ hr/yr} = 69,379 \text{ mile/yr}$$

$$\begin{aligned} E_f &= k \cdot [(s/12)^a] \cdot [(W/3)^b] / [(M_{dry}/0.2)^c] \cdot [(365-p)/365] \cdot (S/15) \\ &= 3.49 \text{ lb PM/mile} \\ &= 0.91 \text{ lb PM-10/mile} \end{aligned}$$

where k =	10	(particle size multiplier, PM30)	(k= 2.6 for PM10)
s =	4.8	mean % silt content of unpaved plant roads	
a =	0.8	Constant for PM30/PM-10	
W =	33	tons, average vehicle weight	
b =	0.5	Constant for PM30 (b = 0.4 for PM10)	
Mdry =	0.2	surface material moisture content, % (default 0.2 (dry conditions) when using rainfall parameter)	
c =	0.4	Constant for PM30 (c = 0.3 for PM10)	
p =	125	number of days with at least 0.01 in of precipitation per year	
S =	5	mph speed limit	

$$\text{PM : } \frac{3.49 \text{ lb/mi} \times 69,379 \text{ mi/yr}}{2000 \text{ lb/ton}} = 121.15 \text{ tons/yr}$$

$$\text{PM-10 : } \frac{0.91 \text{ lb/mi} \times 69,379 \text{ mi/yr}}{2000 \text{ lb/ton}} = 31.50 \text{ tons/yr}$$

** unpaved roads **

III. Triaxle Dump Truck

$$8.25 \text{ trip/hr} \times 0.15 \text{ mile/trip} \times 2 \text{ (round trip)} \times 8,760 \text{ hr/yr} = 21,681 \text{ mile/yr}$$

$$\begin{aligned} E_f &= k \cdot [(s/12)^a] \cdot [(W/3)^b] / [(M_{dry}/0.2)^c] \cdot [(365-p)/365] \cdot (S/15) \\ &= 5.57 \text{ lb PM/mile} \\ &= 1.45 \text{ lb PM-10/mile} \end{aligned}$$

where k =	10	(particle size multiplier, PM30)	(k= 2.6 for PM10)
s =	4.8	mean % silt content of unpaved plant roads	
a =	0.8	Constant for PM30/PM-10	
W =	21	tons, average vehicle weight	
b =	0.5	Constant for PM30 (b = 0.4 for PM10)	
Mdry =	0.2	surface material moisture content, % (default 0.2 (dry conditions) when using rainfall parameter)	
c =	0.4	Constant for PM30 (c = 0.3 for PM10)	
p =	125	number of days with at least 0.01 in of precipitation per year	
S =	10	mph speed limit	

$$\frac{5.57 \text{ lb/mi} \times 21,681 \text{ mi/yr}}{2000 \text{ lb/ton}} = 60.41 \text{ tons/yr}$$

$$\frac{1.45 \text{ lb/mi} \times 21,681 \text{ mi/yr}}{2000 \text{ lb/ton}} = 15.71 \text{ tons/yr}$$

Total PM Emissions From Unpaved Roads = 319.94 tons/yr
Total PM-10 Emissions From Unpaved Roads = 76.82 tons/yr

**** storage ****

The following calculations determine the amount of emissions created by wind erosion of storage stockpiles, based on 8,760 hours of use and USEPA's AP-42 (Pre 1983 Edition), Section 11.2.3.

Material	Silt Content (wt %)	Pile Size (acres)	Storage Capacity (tons)	P M Emissions tons/yr	P M-10 Emissions tons/yr
Sand	0.8	0.500	10,000	0.08	0.03
Limestone	2.0	0.900	15,000	0.38	0.13
RAP	2.0	0.100	2,000	0.04	0.01
Total				0.51	0.18

Sample Calculation for Sand:

$$E_f = 1.7 \cdot (s/1.5) \cdot (365-p)/235 \cdot (f/15)$$

$$= 0.93 \text{ lb/acre/day}$$

where s = 0.8 % silt
p = 125 days of rain greater than or equal to 0.01 inches
f = 15 % of wind greater than or equal to 12 mph

$$E_p (\text{storage}) = E_f \cdot sc \cdot (20 \text{ cuft/ton}) \cdot (365 \text{ day/yr})$$

$$(2.000 \text{ lb/ton}) \cdot (43,560 \text{ sqft/acre}) \cdot (30 \text{ ft for sand, 12 ft for stone and slag, \& 20 ft for RAP})$$

where sc = 10,000 tons storage capacity

$$PM = 0.03 \text{ tons/yr} \quad P M-10: 35\% \text{ of PM} = 0.01 \text{ tons/yr}$$

The following calculations determine the amount of worst case VOC emissions created by the application of cutback asphalt with a typical value of 35% by volume of diluent, based on 8,760 hours of use and USEPA's AP-42, 5th Edition, Section 4.5, Table 4.5-1.

VOC Emission Factor = 1.7% weight percent flash-off of cold mix
Potential Throughput (tons/yr) = 5,256,000 tons/yr stockpile mix

Potential VOC Emissions (tons/yr) = Potential Throughput (tons/yr) * wt percent flash-off
Potential VOC Emissions = 88,300.80 tons/yr

* Weight percent flash-off is based on a 7.0 percent by weight of cutback asphalt in stockpile mix, of which 24% evaporates based on the cutback asphalt containing 35% by volume of diluent of which 95% evaporates (from Table 4.5-1).

**** summary of source emissions before controls ****

Criteria Pollutants:

P M:	110,772 ton/yr
P M-10:	25,766 ton/yr
S O 2:	889 ton/yr
N O x:	329 ton/yr
C O:	119 ton/yr
V O C:	88,341 ton/yr (includes volatile organic HAPs from aggregate drying operation)

**** source emissions after limitations and controls ****

In order to qualify for the FESOP program, this source must limit SO₂ and NO_x emissions to 99.0 tons per year. Consequently, SO₂ and NO_x emissions from the aggregate dryer must be limited to 98.98 tons per year (99.0 tons per year - 0.0131 tons per year from the hot oil heater) and 95.49 tons per year (99.0 tons per year - 3.51 tons per year from the hot oil heater), respectively.

* Emissions of PM and PM-10 from aggregate drying operations are controlled with a 99.9 control efficiency.

**** source usage limitations ****

The following calculations determine the amount of emissions created by natural gas combustion based on a fuel usage limitation of 1.01E+09 cf

Natural Gas: $\frac{1,005,140 \text{ MMcf/yr}}{2,000 \text{ lb/ton}}$ * Ef (lb/MMcf) = (ton/yr)

P M:	1.9 lb/MMcf =	9.55E-04 ton/yr *
P M-10:	7.6 lb/MMcf =	3.82E-03 ton/yr *
S O 2:	0.6 lb/MMcf =	0.30 ton/yr
N O x:	190.0 lb/MMcf =	95.49 ton/yr
V O C:	5.5 lb/MMcf =	2.76 ton/yr
C O:	84.0 lb/MMcf =	42.22 ton/yr

The following calculations determine the amount of emissions created by No.2 distillate fuel oil @ 0.5 % sulfur based on a fuel usage limitation of 2,521,763 gal/yr:

No. 2 Distillate Oil: $\frac{2,521,763 \text{ gal/yr}}{2,000 \text{ lb/ton}}$ * Ef (lb/1,000 gal) = (ton/yr)

P M:	2.0 lb/1000 gal =	2.52E-03 ton/yr *
P M-10:	1.0 lb/1000 gal =	1.26E-03 ton/yr *
S O 2:	78.5 lb/1000 gal =	98.98 ton/yr
N O x:	24.0 lb/1000 gal =	30.26 ton/yr
V O C:	0.20 lb/1000 gal =	0.25 ton/yr
C O:	5.0 lb/1000 gal =	6.30 ton/yr

The following calculations determine the amount of emissions created by No. 6 residual fuel oil @ 1.67 % sulfur based on a fuel usage limitation of 755,025 gal/yr:

No. 6 Residual Fuel Oil: $\frac{755,025 \text{ gal/yr}}{2000 \text{ lb/ton}}$ * Ef (lb/1000 gal) = (ton/yr)

P M:	18.6 lb/1000 gal =	7.01E-03 ton/yr *
P M-10:	18.6 lb/1000 gal =	7.02E-03 ton/yr *
S O 2:	262.2 lb/1000 gal =	98.98 ton/yr
N O x:	47.0 lb/1000 gal =	17.74 ton/yr
V O C:	1.04 lb/1000 gal =	0.39 ton/yr
C O:	5.0 lb/1000 gal =	1.89 ton/yr

Criteria Pollutant:

		Worst Case Fuel
P M:	7.01E-03 ton/yr	No. 6 Residual Fuel Oil
P M-10:	7.02E-03 ton/yr	No. 6 Residual Fuel Oil
S O 2:	98.98 ton/yr	No. 6 Residual Fuel Oil
N O x:	95.49 ton/yr	Natural Gas
V O C:	2.76 ton/yr	Natural Gas
C O:	42.22 ton/yr	Natural Gas

**** source emissions after controls ****

Primary Fuel: Natural Gas

95.49 tons NOx/year limited	*	2768.16	MMCF	=	1005.140	MMCF
262.98 tons NOx/year potential			year potential			year limited

Secondary Fuel: #2 distillate oil

98.98 tons SO2/year limited	*	7,258	Kgals	=	2,522	Kgals
284.89 tons SO2/year potential			year potential			year limited

Fuel equivalence limit for natural gas based on NOx emissions from #2 distillate fuel oil:

87.10 #2 F.O. potential emissior	/	96.54 n.g. potential emis. (ton/yr)
7,258 #2 F.O. potential usage (kgal/yr)		1016.16 n.g. potential usage (MMCF/yr)
= 1.263E-01 MMCF n.g. burned		
No. 2 distillate fuel oil (kgals)		

Backup Fuel: # 6

98.98 tons SO2/year limited	*	6,774	Kgals	=	755.025	Kgals
888.09 tons SO2/year potential			year potential			year limited

Fuel equivalence limit for #6 residual fuel oil based on SO2 emissions from #2 distillate fuel oil:

888.09 #6 F.O. potential emis. (ton/yr)	/	284.89 #2 F.O. potential emissions (ton/yr)
6,774 #6 F.O. potential usage (kgal/yr)		7258.29 #2 F.O. potential usage (kgal/yr)
= 3.3400 No. 2 distillate fuel oil		
Kgal #6 F.O. burned		

Fuel equivalence limit for # 6 residual fuel oil based on NOx emissions from natural gas:

159.20 # 6 F.O. potential emissio	/	96.54 n.g. potential emis. (ton/yr)
6,774 # 6 F.O. potential usage (kgal/yr)		1016.16 n.g. potential usage (MMCF/yr)
= 2.474E-01 MMCF n.g. burned		
No. 6 distillate fuel oil (kgals)		

**** source emissions after controls ****

hot oil heaters:		nonfugitive	
P M:	0.27 ton/yr x	100.00%	emitted after controls = 0.27 ton/yr
P M-10:	0.27 ton/yr x	100.00%	emitted after controls = 0.27 ton/yr
aggregate drying:		nonfugitive	
P M:	110,441 ton/yr x	0.10%	emitted after controls = 110.44 ton/yr *
P M-10:	25,684 ton/yr x	0.10%	* emitted after controls = 25.68 ton/yr *

The source is limiting hot mix production to 4,000,000 tons per year.

P M: 110.44 ton/yr x		nonfugitive	
		4,000,000 Limited Throughput (tons/	56.03 ton/yr
		7,884,000 Potential Throughput (tons/yr)	
P M-10: 25.68 ton/yr x		nonfugitive	
		4,000,000 Limited Throughput (tons/	13.03 ton/yr
		7,884,000 Potential Throughput (tons/yr)	
conveying & handling:		fugitive	
P M:	10.31 ton/yr x	50%	emitted after controls = 5.16 ton/yr
P M-10:	4.88 ton/yr x	50%	emitted after controls = 2.44 ton/yr
unpaved roads:		fugitive	
P M:	319.94 ton/yr x	50%	emitted after controls = 159.97 ton/yr
P M-10:	76.82 ton/yr x	50%	emitted after controls = 38.41 ton/yr
storage piles:		fugitive	
P M:	0.51 ton/yr x	50%	emitted after controls = 0.25 ton/yr
P M-10:	0.18 ton/yr x	50%	emitted after controls = 0.09 ton/yr
cold mix VOC storage:		fugitive	
VOC:	Limited Emissions =		
	99.0 - VOC emissions from aggregate drying and fuel Combustion)		80.15 ton/yr
aggregate drying		fugitive	
VOC:	15.89 ton/yr x	100%	emitted after controls = 15.89 ton/yr
	based on annual production limit of 4,000,000 tons of asphalt produced.		

**** summary of source emissions after limitations/controls ****

Criteria Pollutant:	Non-Fugitive	Fugitive	Total
PM:	83.62 ton/yr	165.38 ton/yr	249.00 ton/yr
PM-10:	58.06 ton/yr	40.94 ton/yr	99.00 ton/yr
S O 2:	99.00 ton/yr	0.00 ton/yr	99.00 ton/yr
N O x:	98.34 ton/yr	0.00 ton/yr	98.34 ton/yr
V O C:	2.92 ton/yr	96.04 ton/yr	98.96 ton/yr
C O:	44.61 ton/yr	0.00 ton/yr	44.61 ton/yr

**** miscellaneous ****

326 IAC 7 Compliance Calculations:

The following calculations determine the maximum sulfur content of distillate fuel oil (No. 2 Oil) allowable by 326 IAC 7:

$$\begin{array}{rcl} 0.5 \text{ lb/MMBtu} \times 140,000 \text{ Btu/gal} & = & 70 \text{ lb/1000gal} \\ 70 \text{ lb/1000gal} / 144 \text{ lb/1000 gal} & = & 0.5 \% \end{array}$$

Sulfur content must be less than or equal to 0.5% to comply with 326 IAC 7.

The following calculations determine the maximum sulfur content of residual oil (No. 6 Oil) allowable by 326 IAC 7:

$$\begin{array}{rcl} 1.6 \text{ lb/MMBtu} \times 150,000 \text{ Btu/gal} & = & 240 \text{ lb/1000gal} \\ 240 \text{ lb/1000gal} / 144 \text{ lb/1000 gal} & = & 1.67 \% \end{array}$$

Sulfur content must be less than or equal to 1.67% to comply with 326 IAC 7.

326 IAC 6-1-2 Compliance Calculations:

The following calculations determine allowables based on 326 IAC 6-1-2, which limits stack emissions from this asphalt plant to 0.03 gr/dscf:

600 Tons per Hour Drum-Mix Plant:

$$\begin{array}{l} 0.03 \text{ grain/dscf} \times 90,000 \text{ acfm} \times (460 + 68 / 460 + 300) \text{ Temp} \times ((100 - 2.0) / 100) \% \text{ moisture} \times \\ (525600 \text{ minute/year}) \times (1 \text{ lb/ 7000 grain}) \times (1 \text{ ton / 2000 lb}) = \end{array} \quad \begin{array}{l} 69.01 \text{ tons/yr} \\ 15.76 \text{ lb/hr} \end{array}$$

300 Tons per Hour Drum-Mix Plant:

$$\begin{array}{l} 0.03 \text{ grain/dscf} \times 58255 \text{ acfm} \times (460 + 68 / 460 + 280) \text{ Temp} \times ((100 - 2.0) / 100) \% \text{ moisture} \times \\ (525600 \text{ minute/year}) \times (1 \text{ lb/ 7000 grain}) \times (1 \text{ ton / 2000 lb}) = \end{array} \quad \begin{array}{l} 45.88 \text{ tons/yr} \\ 10.47 \text{ lb/hr} \end{array}$$

40 CFR Part 60.90, Subpart I (Standards of Performance for Hot Mix Asphalt Plants) Compliance Calculations:

The following calculations determine compliance with NSPS, which limits stack emissions from asphalt plants to 0.04 gr/dscf:

*** SV #1: Drum-mix Dryer (600 tph) ***

$$\frac{37.36 \text{ ton/year}}{61,276 \text{ dscf/min}} \times \frac{2,000 \text{ lb/ton}}{525,600 \text{ min/year}} \times \frac{7,000 \text{ gr/lb}}{1} = 0.016 \text{ gr/dscf} \quad (\text{will comply})$$

Allowable particulate emissions under NSPS (0.04 gr/dscf) equate 92.02 tons per year, or: 21.01 lb/hr

*** SV2-1: Drum-mix Dryer (300 tph)***

$$\frac{18.68 \text{ ton/year}}{40,734 \text{ dscf/min}} \times \frac{2,000 \text{ lb/ton}}{525,600 \text{ min/year}} \times \frac{7,000 \text{ gr/lb}}{1} = 0.012 \text{ gr/dscf} \quad (\text{will comply})$$

Allowable particulate emissions under NSPS (0.04 gr/dscf) equate 61.17 tons per year, or: 13.97 lb/hr

Note:

$$\begin{aligned} \text{SCFM} &= 90,000 \text{ acfm} * (460 + 68) * (1 - 0.02) / (460 + 300) \\ &= 61,276 \text{ scfm (assumed 2\% moisture)} \end{aligned}$$

$$\begin{aligned} \text{SCFM} &= 58,255 \text{ acfm} * (460 + 68) * (1 - 0.02) / (460 + 280) \\ &= 40,734 \text{ scfm (assumed 2\% moisture)} \end{aligned}$$

PSD PM Emission Limit for Drum-Mix & Batch Plant Aggregate Dryers:

Source-wide emissions of PM must be less than 250 tons per year such that the requirements of 326 IAC 2-2 (PSD) are not applicable. Therefore, PM from the 2 aggregate dryers shall be limited as follows:

$$249 \text{ tons PM/yr} - 166.65 \text{ tons PM from other sources} = < 83.35 \text{ ton/yr} = < 19.03 \text{ lbs/hr}$$

Total PM from aggregate dryers controlled to: 56.03 tons/yr < 83.35 ton/yr (will comply)

Allowable PM emissions for PSD non-applicability are apportioned to the two aggregate drying facilities as follows:

Drum-Mix Plant Aggregate Dryer (SV # 1; 600tph):

$$\frac{600 \text{ tons/hr}}{900 \text{ tons/hr (total)}} * 83.35 \text{ tons/yr} = 55.57 \text{ tons/yr}$$

Total production capacity per year 2666666.67 tons/yr (based on the combined plant 1 & 2 production capacity limit of 4,000,000 tons of asphalt produced per year)

To comply with the allowable limit of 55.57 ns/yr, the emission factor for compliance = 0.042 lb PM/ton, and
the control efficiency needed for compliance = 99.9% , and
the equivalent pounds/hour at 8760 hours year = 12.69 lb/hr

Drum-Mix Plant Aggregate Dryer (SV2-1; 300 tph):

$$\frac{300 \text{ tons/hr}}{900 \text{ tons/hr (total)}} * 83.35 \text{ tons/yr} = 27.78 \text{ tons/yr}$$

Total production capacity per year 1333333.33 tons/yr (based on the combined plant 1 & 2 production capacity limit of 4,000,000 tons of asphalt produced per year)

To comply with the allowable limit of 27.78 ns/yr, the emission factor for compliance = 0.042 lb PM/ton, and
the control efficiency needed for compliance = 9990.0% , and
the equivalent pounds/hour at 8760 hours year = 6.34 lb/hr

FESOP PM10 Emission Limit for Drum-Mix & Batch Plant Aggregate Dryers:

Source-wide emissions of PM10 must be less than 100 tons per year for FESOP applicability. Therefore, PM10 from the 2 aggregate dryers shall be limited as follows:

$$99 \text{ tons PM10/yr} - 42.20 \text{ tons PM10 from other sources} = 57.80 \text{ ton/yr} = < 13.20 \text{ lbs/hr}$$

$$\text{Total PM10 from aggregate dryers controlled to: } 13.03 \text{ tons/yr} < 57.80 \text{ ton/yr} \quad (\text{will comply})$$

Allowable PM10 emissions for FESOP compliance are apportioned to the two aggregate drying facilities as follows:

Drum-Mix Plant Aggregate Dryer (SV # 1; 600tph):

$$600 \text{ tons/hr} / 900 \text{ tons/hr (total)} * 57.80 \text{ tons/yr} = 38.53 \text{ tons/yr}$$

Using the AP-42 emission factor of 6.5 lb PM10/ton, the potential PM emission rate 8665.80 tons/yr (based on the production capacity limit of 4,000,000 tons of asphalt produced per year and 4,444 hours of operation per year)

$$\begin{aligned} \text{To comply with the allowable limit of } 38.53 \text{ ns/yr, the emission factor for compliance} &= 0.029 \text{ lb PM10/ton, and} \\ \text{the control efficiency needed for compliance} &= 99.6\% , \text{ and} \\ \text{the equivalent pounds/hour at 8760 hours year} &= 8.80 \text{ lb/hr} \end{aligned}$$

Drum-Mix Plant Aggregate Dryer (SV2-1; 300 tph):

$$300 \text{ tons/hr} / 900 \text{ tons/hr (total)} * 57.80 \text{ tons/yr} = 19.27 \text{ tons/yr}$$

Using the AP-42 emission factor of 6.5 lb PM10/ton, the potential PM emission rate 4332.90 tons/yr (based on the production capacity limit of 4,000,000 tons of asphalt produced per year and 4,444 hours of operation per year)

$$\begin{aligned} \text{To comply with the allowable limit of } 19.27 \text{ ns/yr, the emission factor for compliance} &= 0.029 \text{ lb PM10/ton, and} \\ \text{the control efficiency needed for compliance} &= 99.6\% , \text{ and} \\ \text{the equivalent pounds/hour at 8760 hours year} &= 4.40 \text{ lb/hr} \end{aligned}$$

Hazardous Air Pollutants (HAPs)

** aggregate dryer burner**

The following calculations determine the amount of HAP emissions created by the combustion of distillate fuel oil before & after controls @ 0.5% sulfur, from the aggregate dryer burner, based on 8760 hours of use and US EPA's AP-42, 5th Edition, Section 1.3 - Fuel Oil Combustion, Table 1.3-11.

Hazardous Air Pollutants (HAPs): $323.9 \text{ MMBtu/hr} \times 8760 \text{ hr/yr} \times \text{Ef (lb/10}^6 \text{ Btu)} = (\text{ton/yr})$
2,000 lb/ton

		Potential To Emit	Limited Emissions
Arsenic	4.2 lb/10 ⁶ Btu =	5.96E-03 ton/yr	5.96E-06 ton/yr
Beryllium:	2.5 lb/10 ⁶ Btu =	3.55E-03 ton/yr	3.55E-06 ton/yr
Cadmium:	11 lb/10 ⁶ Btu =	1.56E-02 ton/yr	1.56E-05 ton/yr
Chromium:	67 lb/10 ⁶ Btu =	9.51E-02 ton/yr	9.51E-05 ton/yr
Lead:	8.9 lb/10 ⁶ Btu =	1.26E-02 ton/yr	1.26E-05 ton/yr
Manganese:	14 lb/10 ⁶ Btu =	1.99E-02 ton/yr	1.99E-05 ton/yr
Mercury:	3 lb/10 ⁶ Btu =	4.26E-03 ton/yr	4.26E-06 ton/yr
Nickel:	170 lb/10 ⁶ Btu =	2.41E-01 ton/yr	2.41E-04 ton/yr
Total HAPs =		3.98E-01 ton/yr	3.98E-04 ton/yr

** aggregate drying: drum-mix plant **

The following calculations determine the amount of HAP emissions created by aggregate drying before & after controls, based on 8,760 hours of use and USEPA's AP-42, 5th Edition, Section 11.1 - Hot Mix Asphalt Plants, Table 11.1-10 for a drum mix dryer which can be fired with either fuel oil or natural gas. The HAP emission factors represent the worst case emissions (fuel oil combustion).

Pollutant:	Ef	lb/ton x	Potential 900 2000	ton/hr x lb/ton	8760 hr/yr	Limited 457 tons/hr based on annual production limit of 4,000,000 tons of asphalt produced
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Hazardous Air Pollutants (HAPs):		Potential To Emit	Limited Emissions
Benzene:	3.9E-04 lb/ton =	1.54 ton/yr	0.78 ton/yr
Ethylbenzene:	2.4E-04 lb/ton =	0.95 ton/yr	0.48 ton/yr
Formaldehyde:	3.1E-03 lb/ton =	12.22 ton/yr	6.20 ton/yr
Hexane:	9.2E-04 lb/ton =	3.63 ton/yr	1.84 ton/yr
Isooctane:	4.0E-05 lb/ton =	0.16 ton/yr	0.08 ton/yr
PAH (total) HAPs:*	1.1E-04 lb/ton =	0.43 ton/yr	0.22 ton/yr
Methyl chloroform:	4.8E-05 lb/ton =	0.19 ton/yr	0.10 ton/yr
Toluene:	2.9E-03 lb/ton =	11.43 ton/yr	5.80 ton/yr
Xylene:	2.0E-04 lb/ton =	0.79 ton/yr	0.40 ton/yr
7.95E-03 Total HAPs =		31.33 ton/yr	15.89 ton/yr

* See AP-42, Section 11.1, Table 11.1-9 for complete listing of PAH HAPs.

**** summary of source HAP emissions potential to emit ****

Hazardous Air Pollutants (HAPs):

Arsenic:	0.006 ton/yr
Benzene:	1.537 ton/yr
Beryllium:	0.004 ton/yr
Cadmium:	0.016 ton/yr
Chromium:	0.095 ton/yr
Ethylbenzene:	0.946 ton/yr
Formaldehyde:	12.220 ton/yr
Hexane:	3.627 ton/yr
Isooctane:	0.158 ton/yr
Methyl chloroform:	0.189 ton/yr
Lead:	0.013 ton/yr
Manganese:	0.020 ton/yr
Mercury:	0.004 ton/yr
Nickel:	0.241 ton/yr
PAH (total) HAPs:*	0.43 ton/yr
Toluene:	11.43 ton/yr
Xylene:	0.79 ton/yr
Total:	31.725 ton/yr

**** summary of source HAP limited emissions ****

Hazardous Air Pollutants (HAPs):

Arsenic:	5.81E-06 ton/yr
Benzene:	0.780 ton/yr
Beryllium:	3.46E-06 ton/yr
Cadmium:	1.52E-05 ton/yr
Chromium:	9.27E-05 ton/yr
Ethylbenzene:	0.480 ton/yr
Formaldehyde:	6.200 ton/yr
Hexane:	1.840 ton/yr
Isooctane:	0.080 ton/yr
Methyl chloroform:	0.096 ton/yr
Lead:	1.23E-05 ton/yr
Manganese:	1.94E-05 ton/yr
Mercury:	4.15E-06 ton/yr
Nickel:	2.35E-04 ton/yr
PAH (total) HAPs:*	0.22 ton/yr
Toluene:	5.80 ton/yr
Xylene:	0.40 ton/yr
Total:	15.894 ton/yr